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Sent: Tue 4/27/2021 12:29:23 PM (UTC)
Subject: ORR dispute decision - "on the ground" implementation

The EPA/TDEC/DOE/UCOR project team, called the "DRAT," was formed in mid-February and meets weekly. **The purpose of the team is to 1) develop effluent limits for radionuclides, and 2) establish baseline/current conditions of radionuclides in fish in Bear Creek, per the Administrator's 12/31/20 decision.** The team is lead by UCOR (DOE contractor).

- **In order to establish the current level of radionuclides in fish in Bear Creek, fish tissue collection and analysis will commence in early May.** Fish tissue will be collected from several locations along Bear Creek and analyzed for a list of agreed upon radionuclides.
 - Parties are currently negotiating the list of radionuclides to include.
 - DOE has a twice annual fish monitoring program that includes PCBs, Mercury, and some metals, but, to date, has not measured fish/sediment/water in Bear Creek for radionuclides. This program is known as the "BMAP" (biological monitoring and assessment program).
 - The sampling event will correspond with the regularly scheduled PCB and Hg sampling event.
 - Fish tissue samples will be collected upstream and downstream of the EMWMF, and in several locations that may reasonably be expected to be fished by recreational users.
- **Site specific consumption rates.** The decision directs the use of site specific consumption rates in calculating risk-based waster quality levels, and to base landfill effluent discharge limits on the water quality levels.
 - The team has agreed on three stretches of Bear Creek that can reasonably be expected to be fished (at hwy crossing; at greenway trail crossing; at confluence with Poplar Creek). These locations are several stream kilometers downstream from the EMWMF and the proposed EMDF location.
 - A fish population survey will be conducted in early May to count, measure and speciate fish at three locations in Bear Creek.
 - Fish consumption rates will based on the fish population data, specifically the number of fish of "edible size" (30g+) found at each location.
 - *It is not clear how the one-time fish population survey (done via electroshocking) will be converted to a daily and annual fish consumption rate.* This is an action item for the team.
- The team has discussed data quality objectives; EPA and TDEC have provided comments on DOE/UCOR's proposed data quality objectives.
- **The most time-sensitive/immediate objective of the team is to conduct the field work.**
 - UCOR/DOE submitted a draft Sampling & Analysis Plan (SAP) to conduct the fish tissue collection and analysis and the fish population survey (4-8-21).
 - EPA provided comments on the SAP (4-14-21).
 - UCOR/DOE provided responses to comments (4-21-21), and the team held a comment reconciliation meeting (4-22-21).
 - EPA and TDEC are awaiting the revised SAP (as of 4-27-21).
- **The team has several other technical and policy items to address in the coming weeks.**
 - *DOE and EPA have a difference of interpretation regarding compliance with instream water quality levels.* DOE believes the resulting water quality levels will only apply to the area of Bear Creek that may reasonably be expected to be fished, rather than to the entire creek. Therefore, in extrapolating from an instream water quality level to an effluent limit at the EMWMF, the DOE wants to account for the several kilometer distance from the effluent outfall to the "fishing hole" by applying a dilution factor. This is contrary to the way chemical AWQC and effluent limits are set, and would result in no instream standards for the creek except for the portion of the creek identified as the place of reasonable maximum exposure ('fishing hole'). R4 position: the site-specific instream water quality level should be applied to the entire creek, and the effluent limit developed accordingly, similar to the method applied by the CWA for chemicals.
 - *How will one-time fish population data be converted to a fish consumption rate (recreational fishing)? How will relevant literature (existing fish consumption studies) will be used in developing fish consumption rates?*
 - Once instream water quality levels are established for radionuclides, how are these converted to effluent discharge limits? R4 proposes using the same methods as applied to chemicals when developing effluent limits based on chemical AWQC (ie mixing zones, NPDES permit methods), as appropriate.
 - Will effluent limits be based on average monthly, average daily, average annual, or one time maximum, concentrations?
- Next steps:

- Submit, review and approve the SAP for fish collection.
- Conduct field work: 1) fish tissue collection and analysis, 2) fish population surveys
- Resolve outstanding technical and policy issues, including use of dilution factors.
- Evaluate data.
- Develop water quality based effluent levels.
- Assess current conditions of radionuclides in fish tissue.

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